UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report No. 50-321/79-22

Licensee: Georgia Power Company
270 Peachtree Street
Atlanta, Georgia 30303

Facility Name: Hatch, Unit 1

Docket No. 50-321

License No. DPR-57

Inspectors: Robert C. Sauer — 7/31/79
R. C. Sauer — Date Signed

A. H. Johnson — 7/31/79
Date Signed

Approved by: P. T. Burnett, Acting Section Chief, RONS Branch — 7/31/79
Date Signed

SUMMARY

Inspected on July 7-10, 1979

Areas Inspected

This routine, announced inspection involved 56 inspector-hours on-site in the areas of preparation for refueling, review of refueling associated procedures, observation of refueling activities and review of reactor operations logs.

Results

Of the four areas inspected, no items of noncompliance or deviations were identified in two areas. Two apparent items of noncompliance were found in two areas [infraction-failure to follow procedures-paragraph 6.a.(2) and 7.a.(2); infraction-failure to maintain the Reactor Mode Switch in the required locked REFUEL position during core alterations-paragraph 7.b.(1)].

DETAILS

1. Persons Contacted

Licensee Employees

*C. T. Moore, Acting Assistant Plant Manager
*T. V. Green, Assistant Plant Manager
*C. E. Belflower, QA Site Supervisor
*P. E. Fornel, Senior QA Field Representative
*H. W. Dyer, Operations Supervisor
*R. T. Nix, Maintenance Supervisor
J. L. Lewis, Shift Supervisor
C. R. Locke, Reactor Engineer Supervisor
M. A. Griffis, Control and Test Supervisor
*S. F. Curtis, Reactor Engineer
B. F. Barrett, QA Field Representative

NRC Resident Inspector

*R. F. Rogers

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on July 10, 1979, with those persons indicated in Paragraph 1 above. Adequacy of the IRM Functional test procedure to check all alarms and indications which could be initiated by a particular IRM channel was discussed. The inspector stated that the item would be unresolved subject to Region II office review. Subsequently the inspector telephoned the licensee on July 11, 1979, and requested that the procedure be reviewed with the necessary changes made, if required, prior to Unit 1 startup or prior to startup of Unit 2 should an unscheduled shutdown occur. The licensee agreed. (See paragraph 6.a.(1) URI 50-321/79-22-01.)

The licensee acknowledged the two identified items of noncompliance: failure to follow procedures (50-321/79-22-02) and the discovery of the Reactor Mode Switch not being in the required locked REFUEL position (50-321/79-22-05). See paragraphs 5.a.(2), 7.a.(2) and 7.b.(1) for discussion.

Regarding the non-performance of the Source Range Monitor (SRM) functional check prior to the start of refueling operations the licensee stated that a Licensee Event Report (LER) is being drafted to be submitted within thirty days as required by Technical Specifications (Open Item 50-321/79-22-03).

After discussion, the licensee agreed to revise procedure HNP-9302 to incorporate features discussed in paragraph 6.c (Open Item 50-321/79-22-04).

Regarding log entries, the licensee stated procedure HNP-1-816 would be reviewed to determine if additional guidance should be given in making log entries in other than operating conditions (See paragraph 8).

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. New unresolved items identified during this inspection are discussed in paragraph 6.a.(1).

5. Refueling Preparations

The inspectors reviewed the following procedures on fuel handling and inspection:

HNP-1-3940	Rev 7	"Refueling Interlocks"
HNP-1-6929	Rev 1	"Overhead Crane and Operation"
HNP-1-9101	Rev 5	"Receiving New Fuel"
HNP-1-9104	Rev 3	"New Fuel Inspection 8x8R"
HNP-1-9303	Rev 4	"Fuel Assembly Transfer"
HNP-1-10110	Rev 2	"Fuel Movement Procedure"
HNP-1-10927	Rev 3	"Pressure Fuel Sipping"

The inspectors also examined all available documentation in the performance of HNP-1-9101, -9104 and -10927. All new fuel bundle receipt inspection findings were inspected and found acceptable.

Two hundred and sixty previously-irradiated 8x8 bundles and one hundred and thirty-six previously-irradiated 7x7 bundles intended for reload and one hundred and sixty-four discharge bundles were pressure sipped to detect fission-product leakage. Four bundles intended for discharge were found to have leaked. The inspectors review of the sipping records confirmed the licensee's findings.

No items of noncompliance or deviations were identified in this area.

6. Refueling Periodic Tests and Checks

The following procedures were reviewed to assure that certain of the periodic tests and checks required by Technical Specifications were being performed

at the required frequencies prior to and periodically during Unit 1 refueling. The procedures were also inspected for technical content.

HNP-1-3051	Rev 4	"SRM FT&C"
HNP-1-3052	Rev 5	"IRM Functional Test"
*HNP-1-3940	Rev 7	"Refueling Interlocks"
HNP-1-5006	Rev 6	"IRM Calibration"
HNP-1-7406	Rev 8	"Reactor Building Vent Radiation Monitor"
HNP-1-9209	Rev 0	"Core Loading Verification"
HNP-1-9300	Rev 3	"Preparation of RPV for Refueling"
HNP-1-9301	Rev 3	"SRM Core Monitoring"
HNP-1-9401	Rev 4	"Shutdown Margin Checks"
HNP-1-9404	Rev 0	"Control Rod Timing Test"
*HNP-1-10110	Rev 2	"Fuel Movement Procedure"

*Previously identified in paragraph 5.

The review identified three procedures of meaningful concern:

a. HNP-1-3052 Rev 5 "IRM Functional Test"

(1) Review indicates the logic of the procedure does not check all alarms and indications which could be initiated by a particular Intermediate Range Monitor (IRM) channel. The procedure checks only indicator response on the front panel (H11-P606) to each IRM drawer when a function generator, used to simulate a signal from the IRM detector, is connected into the instruments measurement channel. Reactor Protection System response (half scram upon trip of one IRM channel) and channel generated alarms are not verified received at the reactor console (panel H11-P603).

The licensee representative at the exit interview indicated that the procedure would be reviewed for technical adequacy. Subsequent to the inspection and exit interview, on July 11, 1979, in a telephone conversation between the licensee and the inspector, the representative committed to having the procedure reviewed and the necessary changes made, if required, prior to Unit 1 startup or prior to startup of Unit 2 should an unscheduled shutdown occur.

Unresolved Item: This item concerning the adequacy of the IRM Functional Test to properly verify channel performance is considered unresolved pending licensee review of the procedure and communication of the results to Region II (79-22-01).

(2) Review of documented procedure performance indicated HNP-1-3052 was improperly performed prior to the start of Unit 1 refueling. Item 3 in Table 4.1-1 of the Hatch Unit 1 Technical Specifications requires that a functional test of the IRM instrument be performed once a week during refueling. The June 27, 1979 performance of this procedure was performed incorrectly. Steps

applicable when the Reactor Mode Switch is in the REFUEL position were deleted thus negating the validity of the test for proper operation of the instrument prior to proceeding into the refueling evolution on July 3, 1979. Further, the test results were reviewed and approved by cognizant supervisory personnel.

The inspector noted that proper performance of the procedure had been accomplished on July 4, 1979. The inspector pointed out to the licensee that the event appears to be thirty day reportable as required by Technical Specification 6.9.1.9.

This is the first example of apparent noncompliance for failure to follow procedure (79-22-02).

b. HNP-1-9301 Rev 3 "SRM Core Monitoring"

(1) In reviewing this procedure the inspector noted that the licensee had found the instructions to functionally check the Source Range Monitoring (SRM) instrumentation to be inadequate. This inadequacy resulted in the nonperformance of this surveillance check prior to core alterations as required by Technical Specification 4.10.C. When identified, the refueling evolution was immediately stopped, procedure HNP-1-3051, "SRM FT&C" was satisfactorily performed, and the fuel load sequence continued. The facility documented the event in Deviation Report Number 1-79-90. A thirty day reportable LER is being prepared.

This item is considered open pending review of the facility's intended corrective action (79-22-03).

c. HNP-1-10110 Rev 2 "Fuel Movement Procedure"

(1) Review of the procedure indicated that criteria for stopping refueling and rules for periods when refueling is interrupted were not present. For those facilities committed to ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants," these criteria are to be incorporated into the main body or governing document of fuel handling procedures. Since Unit 2 is committed to this document (Unit 1 is not) review of its fuel handling procedure, HNP-2-9302 Rev 0 "Fuel Movement Operation", indicated a similar deficiency. The licensee representative at the exit interview committed to revising the -9302 procedure for both units by October 10, 1979. Revision of -10110 for Unit 1 would be inappropriate since it was written for a one time only performance.

This item is considered open for review in future inspections (79-22-04).

7. Observation of Refueling Activities

The inspectors observed refueling activities on the Unit 1 refueling floor and in the control room. Observations noted are presented by area:

a. Refueling floor

(1) Housekeeping was determined adequate and proper preparations had been made for radiation safety and contamination control during fuel handling.

(2) Inspection of the fuel loading sequence disclosed a hand-written message that movements of fuel bundles LJ9438 and HX0162 (step 77) were to be delayed until Step 80. The reason for this delay and proper administrative concurrences for the change were not present. Discussion with the SRO indicated the change was necessary since earlier movement of these bundles could cause Source Range Monitoring (SRM) indication to drop below the required Technical Specification minimum of 3 cps (T.S.3.10.C.2).

Review of the administrative requirements within HNP-1-10110 indicated that changes to the procedure would require the approval of the reactor engineer or his designated alternate in addition to the approval of two SRO's. This concurrence was not obtained.

The point of confusion in obtaining this concurrence was prompted by the loading sequence not being Plant Review Board (PRB) approved. The loading sequence was prepared by the reactor engineer on blank data sheets contained within the PRB approved HNP-1-10110.

Administrative procedure HNP-1-9 Rev 9 "Procedure Writing and Control" gives guidance in this area which specifies that a procedure referencing a document containing steps required to perform a function is in actuality part of that procedure. Further, once the main procedure is reviewed and approved this constitutes approval of the referenced document. This is the second example of apparent noncompliance for failure to follow approved procedures (79-22-02).

b. Control Room

(1) On July 8, 1979 the inspectors noted that the Reactor Mode Switch was not in the required locked REFUEL position (Technical Specification 3.10.A.1). The key to allow manipulation of the switch was found inserted and not placed on the keyboard when not being used as required by administrative procedure HNP-1-314 Rev 3 "Key Control". The key was immediately removed and placed in custody of the shift foreman.

The failure to maintain the Reactor Mode Switch locked in the REFUEL position as required by Technical Specification 3.10.A.1 constitutes an apparent noncompliance with NRC requirements (79-22-05).

8. Reactor Operations Logs

The following records were reviewed for the period July 3, 1979 through July 9, 1979, to ensure that periodic tests and checks required by Technical Specification were being performed at their required frequency and ascertain if any abnormal conditions exist(ed) while refueling evolutions were being conducted:

Shift Foreman's Log

SRO Log - Refuel Floor
SRO Log - Control Room

The inspector's review of these logs identified no items of noncompliance or deviations. The inspector discussed a concern with the licensee representative on the need to document off-standard conditions and similar significant events for historical value. This concern was prompted by two undocumented events which delayed the refueling evolution for a period of time. One event, that of an underwater light being trapped between the core shroud and the reactor vessel shell occurred during the inspection period. The second event involved the situation described in paragraph 7.a.(2), that of changing the fuel load sequence without proper approval. Both events, if properly documented may prevent similar occurrences during the next refueling outage. Since no guidance is given in administrative procedure HNP-1-816 Rev 4 "Operating Logs and Entries" during periods of non-operating conditions, the licensee representative committed to reviewing the procedure to determine if additional guidance should be given.